REMARKS

Interview request

Applicants respectfully request a telephonic interview after the Examiner has reviewed the instant RCE response and amendment. Applicants request the Examiner call Applicants' representative at 858 720 5133.

Status of the Claims

Pending claims

Claims 1, 3 to 11 (note typo in OA, page 1, boxes 4 and 6; and page 2, paragraph 3, of the OA), 25, 27 to 30, 32 to 39, 43 and 44, are pending and under consideration.

Outstanding Rejections

The rejection of claims 1, 3 to 11, 25, 27 to 30, 32 to 39, 43 and 44 under 35 U.S.C. §103, alleging these claims obvious over Morton, et al., WO 95/15338; hereinafter "Morton, WO 95/15338") in view of The Interferon Beta Multiple Sclerosis Study Group (Neurology, 1993, 43:655-661; hereinafter "the MS Study"), has been maintained. Claims 1, 25, 32, 43, and 44, are newly rejected under 35 U.S.C. §112, second paragraph. Claims 11, 3 to 11, 25, 27 to 30, 32 to 39, 43 and 44, are newly rejected under 35 U.S.C. § 112, first paragraph, as a "new matter" written description requirement.

Applicants respectfully traverse all outstanding objections to the specification and rejections of the claims.

Support for the claim amendments

The specification sets forth an extensive description of the invention in the new and amended claims. For example, support for methods that administer IFN-β at a dose that does not produce IFN-β–induced side effects in the individual, can be found, inter alia, on page 12, lines 10 to 13, of WO 00/43033 (the publication of the priority document PCT/AU00/00032). Support for claims directed to methods that administer IFN-β at doses that would be clinically ineffective if the IFN-β was administered alone can be found, inter alia, on page 13, lines 3 to 6, of the specification. Accordingly, no new matter has been added by the instant amendments.

Issues under 35 U.S.C. §103

The rejection of claims 1, 3 to 11, 25, 27 to 30, 32 to 39, 43 and 44 under 35 U.S.C. §103, alleging these claims as obvious over Morton, et al., WO 95/15338; hereinafter "Morton, WO 95/15338") in view of The Interferon Beta Multiple Sclerosis Study Group (Neurology, 1993, 43:655-661; hereinafter "the MS Study"), has been maintained for reasons set forth *inter alia* on pages 2 to 6, paragraph 6, of the OA).

Applicants respectfully traverse and expressly incorporate their previous responses herein, including *inter alia* the responses of October 11, 2007; October 16, 2006; March 29, 2006; October 27, 2005; February 1, 2005; November 5, 2003; and, the submitted expert declaration by Dr. Johnson (see response of October 27, 2005).

However, in brief summary, Applicants respectfully traverse and argue, *inter alia*:

(i) neither Morton, WO 95/15338, nor the MS study nor the combination of the two teach or suggest the combination treatment of Cpn10 and IFN-β for MS as claimed herein;

(ii) administration of a drug at doses which, if not administered in combination with a second, different drug, would be ineffective, is a significantly different fact pattern than "optimizing" an otherwise clinically effective dose;

(iii) Morton, WO 95/15338, does not teach or suggest administering IFN-β to patients at clinically ineffective dosages;

(iv) there is no motivation to combine the cited references Morton, WO 95/15338, and the MS Study, in this obviousness rejection.

The Office alleges that the IFN-β dosage ranges taught in the MS Study are within the range of dosages contemplated by this claimed invention. However, Applicants respectfully emphasize that the MS Study does not teach or suggest administering to any patient the same range of IFN-β dosages administered in practicing this invention's claimed methods because the MS Study expressly teaches administering to patients effective dosages of IFN-β, while in contrast the claimed methods expressly encompass administering to patients only dosages of IFN-β that are clinically ineffective if administered without chaperonin 10 (cpn10). The primary focus of the MS Study is to

determine clinically effective dosages of IFN-β, and the MS Study only advocates administering to patients clinically effective dosages of IFN-β (the IFN-β adminstered alone).

Thus, the absolute range of dosages discussed in the MS Study is not relevant – it is only a figure out of context; the relevant question is whether or not the IFN-β dosage ranges taught for administration to patients in the MS Study are within the range of dosages for administration to patients contemplated by this claimed invention; and the answer is no. The MS Study does not teach administering clinically ineffective dosages of IFN-β (i.e., amounts of IFN-β that would be clinically ineffective if the IFN-β were administered alone – e.g., without cpn10).

This point is expressly made in the MS study, for example, (from the last page of the abstract:

> MS activity was significantly less in the high-dose IFN-β group. IFN-β treatment was well tolerated: the significant reductions in exacerbation rates, severity of exacerbations, and accumulation of MRI abnormalities occurred in the absence of serious side effects. IFN-β is the only treatment that has substantially altered the natural history of MS in a properly controlled clinical trial.

Thus, the MS Study makes no express or implied suggestion to administer to a patient a clinically ineffective amount of IFN-β.

To further clarify this distinction, please note that while the MS study discloses administering (alone) 1.6 and 8 MIU of IFN-β (which are IFN-β dosages/ amounts with the range of pending claim 10), the MS study only advocates administering 1.6 and 8 MIU of IFN-β to patients if this would be considered a clinically effective amount for that patient (which of course varies for each patient depending on multiple factors, for example, the weight and/or health of the patient). In contrast, this invention only teaches administration of amounts of IFN-β that would be clinically ineffective if administered alone.

Additionally, the MS Study makes no express or implied suggestion to use any combination therapy to treat MS.

Accordingly, in light of these remarks and the instant claim amendment, and remarks from Applicants' previous responses, Applicants respectively aver that the rejection under §103(a) can be properly withdrawn.

Issues under 35 U.S.C. §112, second paragraph

The phrase "clinically ineffective"

Claims 1, 25, 32, 43, and 44, are newly rejected under 35 U.S.C. §112, second paragraph, as allegedly indefinite, see, e.g., paragraph 8, page 7, of the OA. In particular, it is alleged that the phrase "clinically ineffective" is vague and is not defined in the specification.

However, if the claims read in light of the specification reasonably apprise those skilled in the art both of the utilization and scope of the invention, and if the language is as precise as the subject matter permits, the claims satisfy the requirements of section 112, second paragraph. See also MPEP 2173.02, pg 2100-218 to -220, 8th ed. Rev. 6, September 2007, where it is emphasized that the test to determine compliance with section 112, 2nd paragraph, is whether the claimed subject matter is defined with a reasonable degree of particularity and distinctiveness [emphasis in MPEP].

Applicants respectfully aver that the phrase "clinically ineffective" read in light of the specification would have reasonably apprised those skilled in the art both of the utilization and scope of the invention. Applicants respectfully aver that the skilled artisan after reading the specification would have clearly understood the difference between a pharmaceutically effective amount and a clinically ineffective amount. Accordingly, the person of skill in the art was sufficiently and reasonably apprised of the scope and definition of this claimed subject matter to satisfy the requirements of section 112, 2nd paragraph.

However, as the Office is concerned with the phrase "clinically ineffective", the instant amendment also addresses this issue. Although maintaining their traverse, Applicants amend the claims herein to mirror the claims filed in the response dated 16 October 2006. Applicants note that these claims were not rejected under 35 USC 112. Accordingly, Applicants respectfully aver that the Office can properly withdraw the rejection under §112, second paragraph.

Issues under 35 U.S.C. §112, first paragraph - written description- new matter rejection

Claims 11, 3 to 11, 25, 27 to 30, 32 to 39, 43 and 44, are newly rejected under 35 U.S.C. § 112, first paragraph, as a "new matter" written description requirement, as discussed in section 9, pages 7 to 8, of the OA. In particular, it is alleged that the phrase "clinically ineffective" is not described in the specification in such a way as to reasonably convey to one skilled artisan in

the relevant art that the inventors at the time the application was filed had possession of the claimed invention.

However, Applicants respectfully aver that the skilled artisan after reading the specification would have clearly understood the difference between a pharmaceutically effective amount and a clinically ineffective amount. Additionally, the specification expressly discusses administration of clinically effective versus pharmaceutically ineffective dosages, inter alia, on page 13, lines 4 to 6:

> It will also be understood that the present invention contemplates administration of cpn10 and IFN-β in amounts where alone, cpn10 or IFN-β might be ineffective or suboptimal, but in combination, are pharmaceutically effective.

However, as the Office is concerned with the phrase "clinically ineffective", the instant amendment also addresses this issue. Although maintaining their traverse, Applicants amend the claims herein to mirror the claims filed in the response dated 16 October 2006. Applicants note that these claims were not rejected under 35 USC 112. Accordingly, Applicants respectfully aver that the Office can properly withdraw the "new matter" written description requirement rejection under §112, first paragraph.

CONCLUSION

In view of the foregoing amendment and remarks, Applicants respectfully aver that the Examiner can properly withdraw the rejection of the pending claims under 35 U.S.C. §112 first and second paragraphs, and 35 U.S.C. §103(a). In view of the above, claims in this application after entry of the instant amendment are believed to be in condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejections of the claims and to pass this application to issue.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 284502000600. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

As noted above, Applicants have requested a telephone conference with the undersigned representative to expedite prosecution of this application. After the Examiner has reviewed the instant response and amendment, please telephone the undersigned at (858) 720-5133.

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Respectfully submitted,

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